

## University of Groningen

### Knowing what to do

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Propositions belonging to the thesis

## Knowing What to Do

A logical approach to planning and knowing how

Yanjun Li

1. Knowledge-that is a particular kind of goal-directed knowledge-how.
2. knowledge-how cannot be expressed in the combination of the standard Alternating-time Temporal Logic (ATL), which aims at reasoning about ability, and epistemic logic (EL), which aims at reasoning about knowledge-that.
3. knowledge-how can be divided into different levels according to the form of the solution, just like planning problems.
4. Arrow update logic is a perfect tool for reasoning about information change in transition systems.
5. A modal logic should be considered as the combination of a set of formulas and methods to identify the formula set.
6. Relational semantics, axiomatics and tableaux are different ways to identify a set of formulas.
7. Usually, results that seem obvious cannot be easily proved.

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